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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/677,502	10/02/2000	Yoshio Hashibe	0694-134	4484
32192	7590	06/19/2007		
BRADLEY N. RUBEN, PC 463 FIRST ST, SUITE 5A HOBOKEN, NJ 07030			EXAMINER SERGENT, RABON A	
			ART UNIT 1711	PAPER NUMBER
			MAIL DATE 06/19/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

09/677,502

Applicant(s)

HASHIBE ET AL.

Examiner

Rabon Sergent

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 April 2007 and 04 June 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4,6 and 8-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,6 and 8-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

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1. A request for continued examination under 37 CFR 1.114 was filed in this application after appeal to the Board of Patent Appeals and Interferences, but prior to a decision on the appeal. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on April 25, 2007 and subsequent response filed on June 4, 2007 have been entered.

2. Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The language, "said two fireproof glass plates", lacks antecedent basis from claim 8.

3. Claims 1, 2, 4, 6, and 8-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The meaning, intention, and significance of the language, "in combination making a non-intumescent fire-protection product", is unclear, in that it cannot be determined from the language if the claimed fire-protection glass product must itself be non-intumescent. Applicants' amended limitation merely requires that combination of the specifically recited elements not yield a non-intumescent fire-protection product, and it follows that such combination would not yield an intumescent object since the recited elements would not be expected to have intumescent properties. However, it is not seen that the language excludes additional unclaimed elements that would have an intumescent property.

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4. Claims 1, 2, 4, 6, and 8-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Despite applicants' remarks within the response, the examiner has not found support for the amended limitation, "in combination making a non-intumescent fire-protection product". The examiner has no support for the specific requirement that a non-intumescent fire-protection product is made. Furthermore, given the lack of description for the language, it cannot be determined how the language is to be interpreted. See paragraph 3 for further explanation of this position. The examiner has considered the argued last two paragraphs of page 1 of the specification; however, the subject matter of these paragraphs in no way establishes that non-intumescent fire-protection products are excluded or what is meant by the language.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1, 2, 4, 6, and 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friedman et al. ('704) in view of Hentzelt et al. ('668) and further in view of Terneu et al. ('687), Plumat et al. ('978), Arfsten et al. ('578), Benson et al. ('154), and Stephens ('426).

Friedman et al. disclose the production of fire screening protective glazing laminates, wherein a layer of polymeric material, that corresponds to that of applicants, is sandwiched between layers of fireproof glass plates. Friedman et al. further disclose that the glass plates may be surface treated with materials that yield heat reflectance. See abstract; column 2, lines 30+; and column 6, lines 18-29, especially column 6, line 26.

7. Friedman et al. are silent with respect to the limitations of instant claims 8 and 13 and the surface treatments that may be applied to the glass; however, the use of double glazing, additional glass plating attached through an air layer, and infrared reflecting materials, such as metal doped oxides, were known to be useful for such specific applications as transparent fire-screening panels. This position is supported by the teachings of Hentzelt et al. See abstract; figures 2 and 3; and column 3, lines 5-47, especially lines 38-47, within Hentzelt et al. Figure 2 of Hentzelt et al. is considered to disclose features that correspond to applicants' claim 13.

Furthermore, Terneu et al. also disclose the use of double glazing to enhance insulation characteristics of glass panels. See figures and column 6, line 11. Additionally, Terneu et al., Plumat et al., Arfsten et al., Benson et al., and Stephens serve to reinforce the teaching within Hentzelt et al. that doped metal oxides were well-known infrared reflecting glazing materials for glass at the time of invention. See abstract within Terneu et al. See column 4, lines 17-40 within

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Plumat et al. See abstract within Arfsten et al. See column 2, lines 45-60 within Benson et al. See column 3, lines 43-60 within Stephens.

8. Therefore, the position is taken that one of ordinary skill in the art would have been motivated by the teachings of the secondary references, especially the teachings of Hentzelt et al., to modify the fire-screening laminates of the primary reference by employing the claimed doped metal oxides as a heat reflecting surface treatment (glazing), in accordance with the teachings of the primary reference, and by further employing such proven insulation techniques as double glazing and the use of an air barrier, so as to maximize the heat reflectance and fire protection characteristics of the resulting fire-screening glass laminates. The position is ultimately taken that applicants have simply employed well-known materials and techniques in accordance with the teachings of the relied-upon references, so as to arrive at the instant invention.

7. Applicants' response has been fully considered; however, the prior art rejection has been maintained for the following reasons. Firstly, applicants have argued that the existence of isolated elements and/or features in the prior art that are also recited in the rejected claims is not a sufficient basis for concluding that the combination of claimed elements would have been obvious. In response, applicants' argument infers that the examiner has simply picked isolated or unrelated elements from the prior art and combined them without any basis other than applicants' own claims; however, this argument fails to appreciate the teachings of the prior art, especially Friedman et al. The examiner maintains in view of the prior art that the combination of the claimed features would have been *prima facie* obvious at the time of invention. Secondly, applicants continue to argue that the references relied upon are non-analogous; however, the

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examiner maintains that the references are in-fact analogous for the reasons previously set forth. For the sake of convenience, the previously set forth position is as follows. Given that the instant invention is concerned with preventing the transmission of infrared rays or heat rays, and that the primary reference teaches that heat reflectance treatments may be used within firescreening applications, the position is maintained that the secondary references, disclosing the use of heat reflectance glazing materials, are analogous art, because it can be reasonably argued that they are within the field of applicants' endeavor, and it can be further argued that the secondary references are reasonably pertinent to the particular problem with which the inventor was involved (i.e.; the shielding of heat or infrared radiation). *In re Wood*, 202 USPQ 171,174. *In re Clay*, 23 USPQ2d 1058. Thirdly, applicants arguments with respect to the wavelengths of transmitted, reflected, and absorbed radiation have been considered; however, given that the primary reference is concerned with firescreening panels and the shielding of heat radiation to prevent combustion and discloses the use of a layer of polymeric material and heat reflecting glass treatments, applicants have not established any unexpected results relative to the relied upon reference. Fourthly, applicants have argued that the combination of Friedman et al. and Hentzelt et al. is improper, because the instant claims exclude intumescent materials and because Friedman et al. teach away from the use of intumescent materials and PVB materials. In response, contrary to applicants' assertions, in view of the positions taken within paragraphs 3 and 4 above, it is by no means clear that the instant claims definitively exclude intumescent products. Furthermore, while Friedman et al. disclose that the use of intumescent materials may be disadvantageous, contrary to applicants' assertions, there is no concrete or definitive teaching away from the use of such materials. One willing to accept the disadvantages, would have found

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it obvious to utilize such materials as a means of preventing the transmission of heat rays. With respect to arguments concerning Hentzelt et al.'s use of PVB material, it noted that the use of this material is optional within Hentzelt et al. and that Friedman et al. disclose how their fluoropolymer may be used in place of PVB. Therefore, the cumulative teachings of these two references establish how intumescent materials could be used or not used, as desired, and how fluoropolymers may be used in place of PVB. Fifthly, applicants' arguments with respect to Plumat et al. are not well-taken. Despite applicants' argument, the instant claims do not exclude other types of coatings or glass surface treatments, such as the copper layer of Plumat et al., and it is noted that Plumat et al. specifically disclose at column 4, lines 12-16 that oxide coatings may be used and are very effective as infrared radiation screens. Lastly, despite applicants' arguments, the position is maintained that Friedman et al. clearly suggest to one of ordinary skill that heat reflectance treatments can be used. Applicants' argument that Friedman et al. teach away from a physical coating, because surface corona treatment is a surface treatment, rather than a coating is without merit. The argued surface corona treatment applies to the film and is not seen to exclude any other treatment or coating of the disclosed layers of the laminate or structure, especially in view of the argued teachings within column 6. Furthermore, applicants have not distinguished surface treatments from coatings; therefore, the significance of arguments pertaining to this issue remains unclear.

Any inquiry concerning this communication should be directed to R. Sargent at telephone number (571) 272-1079.

R. Sargent  
June 15, 2007

  
**RABON SERGENT**  
**PRIMARY EXAMINER**